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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,174

08/11/2006

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EXAMINER

PATHAK, SUDHANSHU C

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,174	Applicant(s) GILBERTON ET AL.	
	Examiner SUDHANSHU C. PATHAK	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-15 are pending in the application.

Response to Arguments

2. Applicant's arguments filed in amendment dated 08/27/2009 have been fully considered but they are not persuasive.

In regards to the specific argument "Hirvilampi describes using a measured operating parameter, not an analog signal converted from a retrieved digital value corresponding to the type of modulation, for amplifier bias control. Therefore, Hirvilampi does not, disclose: "amplifying means for amplifying the transmission signal, controlled by the analog signal converted from said retrieved digital value corresponding to the type of modulation associated with a transmission signal, decreasing bias current when decreasing the efficiency per bit of the digital modulation and vice versa," as described in currently amended claim 1", this is incorrect. Hirvilampi clearly discloses adjusting a bias level of the amplifier based on the measured operating parameter and the signal modulation scheme (See Column 2, line 64-to-Column 3, line 15). Hirvilampi further discloses decreasing bias current when decreasing the efficiency per bit of the digital modulation and vice versa (Column 5, lines 5-28 & Column 6, lines 1-25). Furthermore, the Office Action below clearly states that Hirvilampi does not explicitly disclose converting means converting said digital value to an analog signal and said mobile transceiver having a battery power supply. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that a digital-to-analog is implemented so as to

convert the modulation information from the baseband processor (digital) to the bias circuit (analog). Therefore, based on the above response to the issues presented in the amendment dated 08/27/2009 the rejections have been maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 11-15 (apparatus) & 5-10 (method) are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirvilampi (6,351,189).

In regards to Claims 1, 4, 5, 7, 9, 11 & 15, Hirvilampi discloses an apparatus (method) (Fig. 3) comprising modulating means for performing multi-carrier modulations (Fig. 3, element 302 & Column 4, lines 30-40) the apparatus further comprising: processing means for retrieving a digital value corresponding to type of modulation associated with a transmission signal (Fig. 3, elements 302, 208, 322 & Column 4, lines 35-40); amplifying means for amplifying the transmission signal, controlled by the analog signal decreasing bias current when decreasing the efficiency per bit of the digital modulation and vice versa (Fig. 3, elements 310 & Abstract, lines 10-14 & Column 2, lines 25-48, 64-67 & Column 3, lines 1-15 & Column 4, lines 35-40 & Column 5, lines 5-25 & Column 5, line 65-to-Column 6, line 20). Hirvilampi further discloses said transmitter apparatus is part of a mobile

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transceiver (Column 1, lines 10-15) having a power supply (Fig. 3, elements 330, 316). Hirvilampi further discloses varying bias based on amplifier electrical characteristics (Abstract, lines 5-10). However, Hirvilampi does not explicitly disclose converting means converting said digital value to an analog signal and said mobile transceiver having a battery power supply. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that a digital-to-analog is implemented so as to convert the modulation information from the baseband processor (digital) to the bias circuit (analog). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that a mobile transceiver includes a battery power supply. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that there is no criticality in selecting the crest factor as a digital value this is a matter of design choice since the crest fact is related to a specific type of modulation. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that there is no criticality in implementing the apparatus in compliance in with one of the standards including 802.11a/802.16a/DVB-T this is a matter of design choice depending on the communication system (network) implemented.

In regards to Claims 2, 6 & 12, Hirvilampi discloses an apparatus (method) as described above. Hirvilampi further discloses signal transmitting means for wirelessly transmitting said transmission signal (Fig. 3, element "To Antenna").

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Hirvilampi satisfies the limitation of the claim.

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In regards to Claims 3, 8, 10 & 13-14, Hirvilampi discloses an apparatus as described above. Hirvilampi further discloses said type of modulation includes one of: bi-phase shift keyed (BPSK) modulation; quadrature phase shift keyed (QPSK) modulation; and quadrature amplitude modulation (QAM) (Column 4, lines 35-40 & Column 5, lines 6-25 & Column 6, lines 1-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Hirvilampi satisfies the limitation of the claim. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that there is no criticality in selecting 16-QAM or BPSK this is a matter of design choice depending on the data rate required.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUDHANSHU C. PATHAK whose telephone number is (571)272-5509. The examiner can normally be reached on 9am-5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on 571-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sudhanshu C Pathak/
Primary Examiner, Art Unit 2611

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